

Administrator O’Keefe gets acquainted with Glenn

BY DOREEN B. ZUDELL

GLENN employees and business and community leaders extended a warm welcome to NASA Administrator Sean O’Keefe during his first visit to the Center on January 24. Accompanied by Senator John Glenn, O’Keefe spent the day getting acquainted with the Center.

After a brief meeting with O’Keefe, Sen. Glenn, and NASA Chief of Staff and White House Liaison Courtney Stadd, Center Director Donald Campbell introduced the Director’s Leadership Team (DLT) to the new administrator. In an open exchange, DLT members shared their views on some of the challenges and opportunities at the Center.

A highlight for employees, O’Keefe held an All Hands Address in the DEB Auditorium at 11:15 a.m. He expressed humility at being accepted into the NASA family and for sharing his visit at the Center with his “hero,”

John Glenn, whom he said “captures the spirit of this Agency.”

Aboard NASA for just 3 weeks, O’Keefe said he has no “master plan” for moving the Agency forward. Rather, he stressed that strategies would evolve in a deliberate and collective manner.

“We need to examine and clarify what we do,” O’Keefe said. “This requires us to define what criteria for performance we want and what outcomes we seek. Sometimes that will require



Photo by Tom Jaes

(Right to left) Queito Thomas, U.S. Army Vehicle Technology Directorate, assigned to the Facilities and Test Engineering Division (FTED), and Ray Castner, FTED, brief Administrator Sean O’Keefe and Center Director Donald Campbell on test activities in the Propulsion Systems Laboratory.

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FY03 budget begins process of discovery

The Agency’s FY03 budget request is \$15 billion, up slightly from \$14.9 billion in FY02. NASA views this proposal as President Bush’s commitment to the Agency’s mission of discovery.

BY DOREEN B. ZUDELL

DURING NASA Administrator Sean O’Keefe’s televised briefing to all Centers on February 4, he stressed that the President’s FY03 budget proposal will enable the Agency to begin the process of developing overall strategies to maximize research and technology objectives. This will entail focusing on

fundamentals and prioritizing capabilities collaboratively among Centers.

“Americans see us [NASA] as the ultimate manifestation of our [human] desire for exploration,” O’Keefe affirmed. “So we need to emphasize areas that the private sectors cannot or will not pursue because of the high technological risks.”

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Former astronaut nominated as NASA deputy administrator

NASA Administrator Sean O'Keefe and the White House have announced the nomination of former astronaut and assistant deputy administrator, Major General Charles F. Bolden, U.S. Marine Corps, as NASA's next deputy administrator.

Bolden, 55, currently serves as the commanding general, 3rd Marine Aircraft Wing. As deputy administrator, Bolden would serve as the chief operating officer for the Agency and report directly to the Administrator. He will be responsible for directing

and managing many of the programs and day-to-day operations and activities at NASA.

"I am enthusiastic about the opportunity to welcome General Bolden back to NASA," said Center Director Donald Campbell. "He will bring a wealth of experience and deep understanding of the mission of NASA to the position."

A veteran of four Space Shuttle flights, Bolden was pilot on STS-61C in 1986 and STS-31 in 1990, and was the mission commander on STS-45 in 1992.

That same year, he was appointed assistant deputy administrator at NASA Headquarters in Washington, a position he held until 1994, when he was named commander of STS-60. He left the space program having logged more than 680 hours in orbit. ♦



Gen. Bolden

NEWS NOTES

LIVE SATELLITE CONFERENCE:

Former General Electric CEO Jack Welch will address today's critical leadership, management, and transformation issues to an estimated audience of 5,000 worldwide via satellite on March 19. There is no charge to attend the presentation, which can be viewed at OAI from 11:00 a.m. to 12:30 p.m. A post broadcast discussion will immediately follow the presentation until 1 p.m. Anyone interested should submit his/her name via e-mail to: thelearningcenter@grc.nasa.gov or call 3-2996/2997. For more information, call Janet Clark, 3-2519.

SCHOLARSHIP FUND: The NASA College Scholarship Fund, Inc., awards scholarships to qualified NASA dependents who are pursuing a course of study in science and engineering fields. Six scholarships will be awarded this year. For your convenience, you can download an application or receive additional information through the following web site: <http://hro.jsc.nasa.gov/jsc-hro-2/specialprogs/fellowships&scholarships.htm>. Applications must be returned to Johnson Space Center by March 22. For more information, call Marie Borowski, (216) 433-5582.

BPW MEMBERSHIP LUNCHEON:

NASA Glenn Business and Professional Women (BPW) will hold its annual membership luncheon on Fri., March 8 from 11:30 a.m. to 1:00 p.m.,

Dr. Jeanette Grasselli Brown, chair of the Ohio Board of Regents and former director of Corporate Research

and Analytical Sciences for BP America, will deliver a keynote address on "The Educated Woman in Today's Economy." For tickets, contact Barbara Kakiris via e-mail or phone, (216) 433-2513.

ATTENTION COLLEGE MENTORS:

Lewis' Educational Research and College Internship Program (L.E.R.C.I.P.) student applications for summer 2002 will be available for mentors review March 18-27, 9:00 a.m. to 3:30 p.m.,
For more information, call Susan Gott, 3-3833.

INTERNSHIP WEB SITE: NASA and the American Society for Engineering Education have launched a new web site designed to increase undergraduate and graduate students access to research and internship opportunities in science and engineering. The web site is www.tech-interns.com.

GOLFERS WANTED: NASA Sunshine (mixed) Golf League is accepting new members for its Thursday league at

The league plays 9 holes with tee times from 3:30 to 5:00 p.m., Apr. 25-Sept. 12. Spouses and retirees are welcome. Dues are \$30. For information, call Donna Clements, (216) 433-3566.

RETIREES WANTED FOR VC: Glenn retirees looking for a rewarding way to spend their time might consider becoming a Visitor Center volunteer. Several positions such as lobby aide and docent are available. If you can donate

4 to 5 hours per week or one weekend day per month, this opportunity may be for you. Call Monica Boyd, (216) 433-2004.

AFGE MEETING: AFGE Local 2182, will hold its monthly membership meeting on Wed., March 6 at the

at 4:30 p.m. All members are encouraged to attend.

LESA MEETING: LESA/IFPTE, Local 28, will hold its monthly membership meeting on

AeroSpace Frontiers is an official publication of Glenn Research Center, National Aeronautics and Space Administration. It is published the first Friday of each month by the Community and Media Relations Office in the interest of the Glenn workforce, retirees, government officials, business leaders, and the general public. Its circulation is approximately 6,700.

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DEADLINES: News items and brief announcements for publication in the April issue must be received by noon, Fri., March 15. The deadline for the May issue is noon, Fri., April 19. Submit contributions to the editor via e-mail doreen.zudell@grc.nasa.gov, fax (216) 433-8143, phone (216) 433-5317 or (216) 433-2888, or Ideas for news stories are welcome but will only be published as space allows.

IN APPRECIATION

The Themes family sends thanks to NASA friends who took time to express sympathy and support during the recent illness and death of Catherine, wife of Roy and mother of Christopher, Janice, and Leanne.

—Chris Themes

I would like to express my deep gratitude to my fellow Glenn employees and to the employees of Analex and Zin Technologies for the tremendous amount of support you have shown me and my family at the death of my sister, Barbara Thompson Boomer. Your prayers and expressions of compassion meant so much, both during Barb's struggle with cancer and at the time of her passing.

—Bill Thompson

IN MEMORY

Barbara Johnson, 66, who had worked at Plum Brook Station, recently died.

Paul Langendorfer recently died. He had worked in the Receiving and Shipping area before retiring in 1981 after 25 years of Federal service.

Edward Spieth, 85, who retired with 35 years of NASA service, recently died. He had worked as a general supply specialist.

Women's History Observance set

The Women's History Observance Event will be held at 9:30 a.m. on March 28 in the *Glenn Center*. The featured speaker will be Cleveland's first female Chief of Police, Mary Bounds. Back by popular demand, the *Women in History Troupe* will portray a vignette of marine biologist and environmentalist Rachel Carson (1907-1964) and Fannie Lou Hamer (1907-1977), civil rights activist and organizer of the Mississippi Freedom Party. The Federal Women's Program Awards, in the categories of supervisor and non-supervisor, will be presented following the performance.



Director's Corner with DONALD CAMPBELL

Opportunities abound

*W*E use the word "opportunities" often at NASA. However, I believe right now this word has heightened significance for Glenn.

A driving force behind this belief is our new Administrator, Mr. Sean O'Keefe. I have had numerous occasions to meet with Mr. O'Keefe and have consistently found him to be an open, optimistic, and dynamic individual. As you may have observed during his recent visit to Glenn, Mr. O'Keefe's demeanor encourages dialogue and openness. Many of you interacted with him as he toured several of our facilities. As I accompanied Mr. O'Keefe, Senator Glenn, and Headquarters personnel, I was extremely proud of each of you.

While in Cleveland Mr. O'Keefe met with government leaders such as Governor Taft and Mayor Campbell, as well as local university officials. During these exchanges, the Administrator stressed the importance of unity within NASA, and the relevance of our technology to the local and national community.

Mr. O'Keefe also emphasized the importance of collaboration and cooperation. Within the modern NASA dynamic many activities require us to work across organizational boundaries, both internal and external to the Center, to achieve our goals. I believe that there are great dividends to be gained from this philosophy.

The President's FY03 budget proposal clearly represents a commitment to NASA and NASA's mission of discovery. The budget, along with directives from Mr. O'Keefe, offers us stability to plan and execute our programs. It also results in opportunities to shape our Center's future, and remain at the forefront of technological advancement.

Exchange Corner

Thank you for helping us celebrate your new Main Cafeteria Grand Re-Opening events the week of Jan. 14. The raffle winners are: Karen Ault (0120), 1st Prize—autographed John Glenn T-shirt; Karin Gornick (0210), 2nd Prize—4 Cleveland Cavaliers tickets; Patty Meldrum (0620/CIT), 3rd Prize—autographed John Glenn hat; Toni Cosari (0460) and Damaris Klanac (6160), 4th Prize—Conrad Auto Center's oil change; and Vanessa Smith (0540/SAIC), 5th Prize—Cinemark movie tickets.

Kudos to Connie Carroll, Exchange Gift Shop manager. Carroll recently received a special letter of appreciation from Bernard Matis of Parma, OH, for Carroll's outstanding service that helped to ensure a Merry Christmas for his son, who is a NASA enthusiast. In addition to her time spent in assisting Matis in his gift selections over the phone, Carroll delivered the gifts to Matis at the gate due to NASA's period of heightened security.



people on the move

honors and awards

Three employees—**Raymond Kacmar**, **Naseem Saiyed**, and **Dr. Margaret Tuma**—were recognized at NASA Headquarters for completing the 2001 Professional Development Program (PDP).



Kacmar



Saiyed



Dr. Tuma



Williams

Participants in the NASA PDP are competitively selected by their center, and they engage in a year-long intensive leadership development program that combines work assignments, workshops, briefings by NASA's leadership, targeted training opportunities, and individual coaching. The goal of the PDP is to provide these future leaders with a broad perspective of both the Agency and the impact of its programs.

This specific class took on a voluntary educational project to encourage students to pursue higher education in mathematics, science, and engineering through establishing an interactive web page that will enable undergraduate and graduate students to expand their search beyond the Agency (see *News Notes* on page 2).

Glenn graduates agree that the PDP experience has broadened their understanding and provided them opportunities to develop leadership skills.

Saiyed, who works in the Acoustics Branch, said, "The training and experience in the PDP helped me develop new skills and refine existing skills to be a leader in NASA."

Dr. Tuma said her PDP experience has opened many doors. "Since returning to Glenn, I have held three different detail positions. The first was in the Research and Technology Directorate Office working on the NASA Blueprint for Aeronautics," said Tuma. "The second and third details have been in the Space Transportation Project Office, where I have utilized my management skills as a product line manager for Integrated Vehicle Health Management and as the 2nd Generation RLV Propulsion Element manager."

Kacmar, who now works at Dryden Flight Research Center, sees many

benefits of the PDP program as well. "It [PDP] enabled me to take an in-depth review of myself and realize what my true values and goals are and how they fit in with the NASA goals and objectives. The program helped me determine where I wanted to be down the road and what actions I needed to take to get there (even though it meant transferring to Dryden). It also brought me up to speed on some of the latest developments in management tools and techniques.

Glen M. Williams, Office of Acquisition, has been awarded one of the *NASA Procurement Person of the Year Awards*. He was recognized as the "Midrange/Commercial Person of the Year" for his outstanding work. During the past year Williams oversaw the NASA Research Announcement for the Lithium-Based Polymer Energy Rechargeable System, where he provided training on processing mid-range procurements. Williams also served as the prime party for identifying and reporting to Headquarters the contracts that required safety provisions and

plans. Williams is commended for his dedication, productivity, and quality of work.

promotion

Patricia (Patty) Raimier was recently selected as the new director for Lewis Little Folks, Inc. (LLF) Day Care Center. Prior to this appointment, Raimier worked as a LLF teacher for 3 1/2 years. She was previously employed as a teacher at the Child Care Center at Riverside Hospital (Columbus, OH). Raimier holds a Bachelor of Science degree in Elementary Education from Ohio State University and is qualified to serve as both principal and substitute teacher for the LLF Kindergarten. She replaces Maureen Sartain who resigned as LLF director in November 2001.



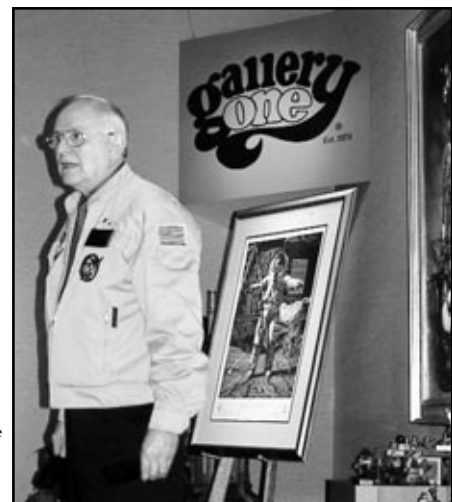
Raimier

in the headlines

astronaut & artist

Apollo 12 lunar module pilot, Skylab 2 Commander and artist Alan Bean (pictured right) made an appearance at on Jan. 19 to open an exhibition of his prints, posters, and books. He presented an informational slide lecture, which focused on his Apollo experiences and how he develops unique perspectives on canvas. Glenn's Community and Media Relations Office supported the event with exhibits from the Apollo era including a Moon rock.

Photo by David DeFelice



Center sets record, achieves awards for CFC

GLENN set a record for donations to the Combined Federal Campaign (CFC) in 2001. The Federal employees and retirees of Glenn contributed over \$410,000 this year, exceeding the campaign goal by \$57,000.

"This year's Combined Federal Campaign at Glenn was a tremendous success," said Center Director Donald Campbell. "Glenn employees' generosity ensures that the charities of CFC can be generous, too—providing gifts of education, nutrition, and other life-supporting aid to those in need."

At ceremonies held on January 17 at the

Glenn also won the coveted Northeast Ohio CFC (NEOCFC) Chairperson Award. It is the most prestigious honor an organization can achieve. The recipient of this award is

recognized as the Agency that conducted the best overall campaign. William Montague, Cleveland's Veteran Administration Medical Center director and this year's chair of the NEOCFC based his selection on the following criteria: donations, participation, CFC promotional events, structure of campaign, and Loaned Executive's narrative.

Orlando Thompson, Sr., Glenn's CFC chairperson said, "I am particularly proud of this year's efforts because not only did Glenn employees extend their generosity to a Nation in need after September 11, but they also continued their annual support to CFC charities."

Photo by Tom Jares



Orlando Thompson, Sr., (right) Glenn's 2001 CFC chairperson, Community & Media Relations Office, presents Center Director Donald Campbell the NEOCFC's Chairperson Award.

Pamelia Caswell, Community & Media Relations Office, contributed to this article.

FY03 request puts stability into the budget

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O'Keefe explained that identifying priorities will be a major force behind issues relating to the International Space Station. Specifically, the Agency will examine five relevant areas: prioritization of the science and technology agenda, analysis of the remaining engineering challenges, determination of the total cost to complete and continue the program, review of obligations with international partners, and refinement of all the elements associated with the program, such as the Space Shuttle operation (i.e. safety and maintenance, frequency of flights, etc.).

"We need to take a comprehensive approach to the International Space Station," O'Keefe explained. "Space Station is not a program off to the side; it's not an individual effort. It is integral to all that goes on at NASA."

The FY03 budget request for the Office of Aerospace Technology Enterprise (Code R) from which Glenn receives half of its program funding, is \$2,815 million. This represents an increase of 11 percent from FY02. Within this request, Glenn will be allocated \$731 million, up 16 percent from FY02.

"We've worked hard at Glenn to position ourselves for the future," explained Center Director Donald Campbell. "The FY03 request puts stability into the budget, which helps us plan our programs."

Chief Financial Officer Robert Fails, explained that while most of Glenn's existing programs will continue on a steady basis, two areas within the budget—a new nuclear power program and the decommissioning of the Plum Brook Reactor—would account for most of the funding growth in FY03.

The Nuclear Systems Initiative is part of a planned long-term, two-part program that would safely enable ambitious robotic missions throughout the solar system. One part of the program would continue production of radioisotope thermoelectric generators, which can provide power for deep space missions operating far from the Sun over a long lifetime. They have been used safely and reliably for the last 40 years.

The second part of the initiative, for which Glenn will play a significant role, would develop a nuclear powered system for advanced propulsion applications, enabling far more capable space-

craft to make faster trips throughout the solar system to visit multiple destinations on the same mission.

The 6-year process of decommissioning the closed Plum Brook Reactor Facility continues through FY03. Decommissioning Project Manager Timothy Polich explained that the major work would involve the transportation and disposal of the core internals; reactor tank segmentation, removal, and disposal; and removal and disposal of equipment in hot dry storage.

Along with his proposed budget, President Bush announced a new system aimed at measuring progress within the Federal government. The *Executive Branch Management Scorecard* examines five areas: Human Capital, Financial Management, Competitive Sourcing, E-Government, and Budget/Performance Integration, with the goal of achieving the highest mark (green) in each category.

Center Director Campbell said that the Agency Budget "creates opportunities" for NASA Centers to work collaboratively toward integrated programs that put us on a path for achievement of our goals. ♦

Center, Cleveland welcome



Diane Malarik, Telescience Support Center operations manager, greets O'Keefe in the lobby of



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doing it differently than what had been done before."

O'Keefe provided further insight into how he believes the Agency can ensure its preeminence. He echoed U.S. Secretary of Treasury Paul O'Neill's (a former colleague at the Office of Management and Budget) three guiding principles of a great organization:

- **Professionalism:** Treat others as you would like to be treated. Showing people that they are valued brings out the best in them.
- **Resources:** Carefully measure what is needed to do the job and ensure that you have the resources or do not attempt to do it.
- **Recognition:** Make certain that results—positive and negative—are noticed. Step back and say, "You did a good job" or "You didn't get the job done."

"We have all the elements right here [in NASA] in place...to do extraordinary things," O'Keefe affirmed.

Following the All Hands Address, O'Keefe was escorted to the Visitor Center (VC) for a luncheon with Governor Bob Taft, local CEOs, university and college administrators, business leaders, and other government officials. This event reserved some time for community leaders outside the Center to show their support for Glenn as a major technological contributor to the Northeast Ohio region.

After lunch, Center Director Campbell accompanied O'Keefe, Sen. Glenn, and Headquarters personnel on tours that provided a sampling of Glenn's research and facilities. The tour stops included areas within the following buildings: Aeropropulsion Systems Laboratory, Communication, Navigation, Surveillance, Electric/Ion Propulsion, Microgravity/ISS.

Later in the afternoon, O'Keefe and Sen. Glenn returned to the VC for a press conference with local media.

(Left to right) Assistant Administrator of Public Affairs Glenn Mahone, Glenn Deputy Director of Operations Julian Earls, and NASA Chief of Staff and White House Liaison Courtney Stadd share a light moment during the DLT meeting.



Sen. Glenn and O'Keefe get to know Cleveland's new mayor, Jane Campbell.



Glenn's Chief Information Officer Sasi Pillay (right) engages O'Keefe in conversation during the evening reception.



Microgravity Division Chief Jack Salzman briefs (left to right) Stadd, Associate Administrator for Aerospace Technology Sam Venneri, Sen. Glenn, and O'Keefe on the Fluids and Combustion Facility mockup in

NASA's new administrator

Introduced by Director of External Programs John Hairston, the new administrator addressed questions ranging from budget issues to educational programs.

In response, O'Keefe reiterated the themes of "collaboration" and "cooperation" among all NASA Centers stressed earlier in the day at the employee address. "Determining the strategic objectives of NASA will require us [on a collective basis] to begin the process of focusing on the core competencies we seek to accelerate," he said.

After a full day at the Center, O'Keefe, Sen. Glenn, and Director Campbell traveled downtown to meet Cleveland's new mayor, Jane Campbell.

After a brief visit with the mayor, O'Keefe was shuttled to the Great Lakes Science Center for a community reception hosted by the Ohio Aerospace Council and the Greater Cleveland Growth Association. In the warm and energetic atmosphere of the reception, officials from Cleveland's public and private sectors welcomed O'Keefe and Sen. Glenn to Cleveland and extended open invitations to visit often.

Cuyahoga County Commissioner and Democratic Party Chairman Jimmy Dimora saluted Sen. Glenn with a resolution for being "Ohio's hometown hero." In a resolution to O'Keefe, the residents of Cuyahoga County applauded the new administrator for his years of dedicated public service and wished him "success in his new responsibility and role at NASA." ♦

O'Keefe, pictured with Campbell and Sen. Glenn, answers questions by local media at an afternoon press briefing.



Michael Doherty, Microgravity Science Division, asks O'Keefe a question during the All Hands Address to employees.



County Commissioner Jimmy Dimora (left) presents a resolution from the Board of Commissioners to O'Keefe during the evening reception.



Governor Bob Taft and O'Keefe visit during a luncheon in the Visitor Center hosted by the Greater Cleveland Growth Association.



Chief of the Power and On-Board Propulsion Technology Division Dr. Valerie Lyons gives details on Glenn-developed technology in the Electric Power Laboratory,



Chief of the Space Communications Office Pete Vrotros (standing) shares highlights on satellite communications technology. Pictured from far back are O'Keefe, Stadd, Campbell, and Sen. Glenn.



**Photos by
Marvin Smith and
Tom Jares**



SEMAA/AELs spread across the country

By S. JENISE VERIS

THE Science, Engineering, Mathematics, and Aerospace Academy (SEMAA) together with the Aerospace Educational Laboratory (AEL) represent a holistic approach to education—with students, parents, teachers, and community stakeholders sharing in the commitment to quality education.

Winston-Salem State University, NC, is the most recent institution to embrace this concept with the opening of its SEMAA/AEL on January 14. This brings the total to 21 educational sites spreading across the country.

Established in 1993 as a partnership between Glenn and Cuyahoga Community College, SEMAA gives form to Congressman Louis Stokes' vision of an academic enrichment program that fosters understanding and enthusiasm for math and science in school-age children. The AEL is a state-of-the-art classroom that houses workstations to support SEMAA curriculum centered on aerospace and microgravity.

"We train teachers to use the SEMAA curriculum, which meets national standards for science and math education, and provides enrichment workshops on teaching techniques in conjunction with workstation scenarios," explained Dovie Lacy, Glenn's SEMAA/AEL program manager in the Office of Educational Programs. "Our curriculum also includes a unique component for parent participation that ensures their support throughout their child's elementary and secondary years, and even later to help them pursue college financial aid."

Glenn proudly supports an AEL in the Flex Building, located in the Aerospace Park. Steve Koons (ACS), MAEL/AEL manager, explained that this site is used for middle and high school field trips and as a testing ground for workstation upgrades. An upcoming upgrade to support the microgravity curriculum is a pre-recorded voice-recognition program that enables a one-on-one conversation with John Glenn who responds to students' questions based on problem-solving scenarios. The program was created by Interactive Drama in Bethesda, MD, using questions

prepared by eighth grade science students from Medina, OH.

This unique innovative software will soon be introduced in an exhibit in the Visitor Center and will be incorporated into the John Glenn Gallery.

Some unique partnerships have formed to bring an AEL to their community. A coalition of local businesses in San Felipe Pueblo is the primary investor for a potential AEL site on a reservation just south of Sante Fe. The Chapel Hill, NC, police

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The latest Virtual Reality workstation in the AEL.

On the road again

By S. JENISE VERIS

FRANK Witcher and Craig Frohman of ACS, Inc., are traveling ambassadors for Glenn's Science, Engineering, Mathematics, and Aerospace Academy (SEMAA)/Aerospace Educational Laboratory (AEL) programs.

Six months out of the year they hit the road in the Mobile Aerospace Educational Laboratory (MAEL), a 53-foot state-of-the-art classroom on wheels, with the mission to excite students about science and math and to introduce them to the opportunities in technology-related careers.

Although the SEMAA curriculum is self-directed, the team must know how to troubleshoot the 10 workstations in the event a student has difficulty. Original MAEL team member Witcher recalled the intensive reading and research required before beta-testing the trailer for 3 months.

"The startup was a little rough, but it has always been exciting to work with kids of all levels," Witcher said. "Now, 5 years and 300 cities later, I feel like it's part of my destiny."

The MAEL averages over 20 tours a year, each about a week in duration. The team supports 4 or 5 classes a day with each session limited to 15

students and 2 teachers. A special demonstration for community leaders is included in the week's activities. At week's end, they all enthusiastically gather to discuss the possibility of having a permanent AEL in their community.

Extensive travel and preparation over long periods of time can be challenging for Witcher and Frohman, but they feel the rewards are limitless.

"I love to see the children's excited faces when they enter the trailer," Frohman said. "Many of these young people have little knowledge of basic science let alone advanced technology. My job allows me to witness the small revelations that occur in them. It also gives me great satisfaction to know that I have, directly or indirectly, spurred their interest in math and science and introduced them to careers they never knew existed."

Witcher and Frohman outside the MAEL.



Glenn retires ACTS flag

BY DOREEN B. ZUDELL

ON January 22, Glenn officially retired the Advanced Communications Technology Satellite (ACTS) flag, which had flown on the Center's flagpole since the satellite's 1993 launch. This extraordinary satellite opened up the Ka-frequency band by showing the viability of spot beam technology and ultra wideband communications.

"While a flag is a symbol commonly used to represent a country, state, or municipality, the ACTS flag represented the development, launch, and operation of the satellite," explained ACTS Project Manager Bob Bauer, Space Communications Office. "It is a proud symbol for all of us of the technological and the application successes that ACTS achieved."

During the ceremony, Bauer, Manager of the Space Communications Office Pete Vrotsos, and Center Director Donald Campbell, highlighted programmatic milestones and accomplishments in the project's history. A number of employees and retirees who had participated in the project over the years also attended. Notably, all ACTS project managers—Richard Gedney and Rodney Knight (both retired), and Sina Javidi and Bauer, Space Communications Office, shared their memories.

"This flag is a source of joy that reminds us of the outstanding job Lewis [Glenn] has done on the project," Knight said.

Although the flag retirement signified the conclusion of the project, the spacecraft continues to operate, now in its 102nd month, with the payload utilization being directed by the Ohio Consortium for Advanced Communications Technology, which is managed by Ohio University. Dr. Dennis Irwin, who played a key role in developing the consortium, was recognized during the recent ceremony. The consortium allows ACTS to continue to benefit academia and industry even though NASA's primary mission has been completed.

"From its conceptual beginning as a technology verification program, ACTS grew and grew into a program that

continually inspired people to expand current applications, as well as to explore new ways to do things that had not yet been done with satellite communications," Center Director Campbell said. "We're glad that ACTS was done right here at Glenn!" ♦

Editor's note: The ACTS flag is now in the hands of the Space Communications Office awaiting a permanent place for display.

Members of Glenn's Security Force ceremoniously removed the ACTS flag from in front of the Administration Building.



Photo by Martin Smith



Graphic by Terry Condrich

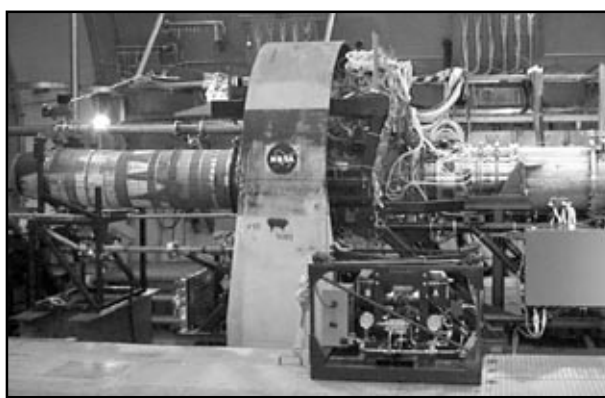
Pushing the envelope—literally

TESTING to improve the performance of the Rolls Royce F405 engine was recently completed in Glenn's Propulsion Systems Laboratory. The tests were conducted in collaboration with Rolls Royce and the Naval Air Systems Command to investigate the source of in-flight engine stalls that caused the Navy to impose altitude restrictions on flight maneuvers performed in the F45 Goshawk, their primary jet trainer.

"We used two systems to collect data from high response instrumentation located throughout the low-speed fan and high-speed compressor to determine what was causing engine stall," explained Queito Thomas, lead PSL test engineer. "The tests were performed between simulated sea level conditions and 30,000 feet, at high inlet airflows."

The two testing systems were separately employed. First, an exhaust plug was inserted into the tail pipe until the fan stalled and the position of the plug was recorded for use during subsequent test points. The second system, known as a fuel-spiking rig, supplied high-pressure fuel to the engine in a predetermined time period to cause a high-pressure compressor stall.

Test planning and validation was completed in less than a year. The data gathered will be used to aid in validation of thermodynamic and control system models.



These models will assist the US Navy to improve the T45 Goshawk flight envelope. Tests such as these are brought to the PSL to utilize the only NASA ground test facility capable of true altitude simulation for the testing of full-scale air-breathing gas turbine engines. ♦

An Xtraspecial event: Connect 4

BY S. JENISE VERIS

ON January 22, Glenn hosted 300 fifth graders from Westlake's Parkside Intermediate School, their teachers and principal, and special guests for a live link to the crew of the International Space Station, which is orbiting 240 miles above Earth.

For nearly 20 minutes, the Parkside students were connected via satellite with Space Station's Expedition 4 crew—Colonel Yuri Onufrienko of Russia, USN Captain Daniel Bursch, and Cleveland's own USAF Colonel Carl Walz. The students, including Walz's niece, Emma, took turns asking the astronauts questions that ranged from their daily routine to their favorite projects.

"I just had a chance to do a space walk last week, and fortunately, we didn't encounter any debris," Walz replied. "However, there is a lot of debris up here," Walz joked watching Bursch grab a pillow that floated by.

When asked which of their current Space Station projects they personally felt will be the biggest help to people on Earth, Bursch said, "I think we've already done what will be the biggest help, which is learning the cultures of other countries and working together to build Station. It's not easy, but hopefully it will make your futures brighter to see that so many countries [16] are working towards a common goal."

The Space Station link-up was the crescendo to Parkside School's science project on space complemented by a social studies unit on explorers. The well-drawn proposal prepared with fervor by Walz's sister-in-law, Sue Walz, a teacher at Bassett Elementary, along with Parkside teachers Sharon Waffan and Cathy Pietrowski, convinced Johnson Space Center to recognize the significant educational value that the event would yield.

Adults and students expressed their gratitude and amazement to witness the leaps in technology that enabled them to view and hear the astronauts in real-time.

"I was sitting there thinking that this could be a once-in-a-lifetime experience," said fifth grader Evan Hurst. "It made me think I would like to be an astronaut."

Center Director Donald Campbell, a prominent Westlake resident, greeted the students and invited guests, which among others included Westlake's mayor, Dennis Clough, school superintendent, James Costanza, and Andrea Rocco of the Westlake Board of Education.

James Fitzgerald (OKSU), from the Office of Educational Programs (OEP), coordinated Glenn's educational outreach for the event, while David DeFelice, Community and Media Relations Office, handled the logistics. Before the event, OEP space videos supplemented the teachers' lesson plans. In addition, Jeff Woytach, Space Flight Project Branch, a member of Glenn's Speakers Bureau, spoke to the students about Space Station and living in space, and helped them draft their questions. A scavenger hunt and video at the Visitor Center, along with career panel presentations offered by various



Photos by Marvin Smith

Above: Astronauts Carl Walz and Daniel Bursch live from the Space Station.



Left: Parkside's Principal Mark Bregar and fifth grader Beth Moroney await a response from the astronauts.

professionals in the DEB Auditorium, augmented the live event.

"In my mind it [the event] was perfect. I couldn't have wished for any better outcome," Sue Walz said. "Not only was the link with the Space Station more than we expected, but all the other activities were just as wonderful and truly educationally valuable." ♦

Editor's Note: For more information about the student project, visit Westlake Schools' web site <http://westlake.k12.oh.us/Parkside/>



Glenn is sponsoring the first Buckeye Regional FIRST (For Inspiration and Recognition of Science and Technology) robotics competition on March 15-16 at the Cleveland State University Convocation Center.

Come see an exciting competition among over 50 high school teams, including several local schools. Watch as teams try to outwit one another using remote-controlled robots they have designed and constructed with the help of engineers and technicians from Glenn and local corporations. This is great entertainment for the whole family at a great price—it's free! For more information or to volunteer to help, call Carol Galica, (216) 433-5112.

Behind the Badge...

a closer look at our colleagues

Dave Herb



Job Assignment: I'm a construction manager in the Construction Management Branch, Facilities Testing & Engineering Division.

Time at Glenn: 45 years and 2 months.

Hometown: I'm originally from Sandusky, OH,

Describe your family: We have 4 children (2 boys and 2 girls), 11 grandchildren (9 boys and 2 girls from ages 6 months to 23 years).

Career alternative: Surveyor—Civil Engineer

Favorite Food: Anyone who knows me can sort of tell that I like all foods especially shell fish, custard pie, and coconut cream pie.

Favorite music: I like all music, depending on the time, place, and mood.

Favorite web site: Turning off my PC at 4:30 p.m. each day and not turning it back on until the next morning.

Favorite book or magazine: *Games People Play* by E. Burns.

Favorite movie or play: *Pearl Harbor* and *Titanic*.

Activities when away from Glenn: I've umpired Little League softball for 30 years as well as some high school basketball. I also still play softball on Lab (Aces).

What do you see as an area of expertise to be proud of at Glenn: Some of the contracts I have managed over the past 40 years—including the recent rehab of the Main Cafeteria, replacing Underpass Road in 2001, numerous installations of research facilities/buildings—and last but not least, a member of the Speakers Bureau since 1970 with over 500 presentations during that time.

Nona Akos



Job Assignment: I'm an employee development specialist in the Organization Development and Training Office in the Office of Human Resources.

Time at Glenn: 21 years

Hometown: My hometown is Mt. Pleasant, PA.

Describe your family: My husband is a retired math teacher. We have 3 sons, 2 daughter-in-laws, and 1 granddaughter who will be two in October.

Favorite food: Spaghetti

Favorite music: Country and Classical

Favorite web site: ecampus.phoenix.edu

Favorite book or magazine: *Hawaii* by James A. Michener

Favorite movie or play: *Kate & Leopold*

Person you most admire: Mother Teresa

Activities when away from Glenn: I enjoy traveling, gardening, and swimming.

What do you see as an area of expertise to be proud of at Glenn: The training that is offered to the employees of Glenn. The people at Glenn are the best!

Graphic by Kelly Shankland

SEMAA/AELs bring technology within reach

CONTINUED FROM PAGE 8

department is working with their Board of Realtors to establish one for the underserved youth in their community. These are just two examples of how the SEMAA/AEL program aids systemic reform—it becomes a community resource to help its youth reach their full potential.

"The young people who participate in this program will be the engineers, researchers, and computer experts of tomorrow," said John Hairston, Glenn's External Programs director. "The goal of this program is to inspire them to excel. The sky is the limit!" ♦

Editor's note: Affiliated Computer Services, Inc. (ACS) teams have

supported the AEL as well as the Mobile Aeronautics Educational Laboratory (MAEL) since 1998. The AEL team consists of James Ely, Brent Pace, Loretta Oley, Gerald Voltz, David Wyatt, and Steve Ondrusko. The MAEL team is Frank Wichter and Craig Frohman. Paragon TEC is a subcontractor for both teams.



MLK awards affirm individuality *and* unity

BY S. JENISE VERIS

THIS event allows us to remember someone who devoted his life to working on behalf of others—a challenge for everyone at the Center,” said Center Director Donald Campbell during opening remarks at the Dr. Martin Luther King, Jr. Equality Recognition Ceremony held in the Visitor Center on January 23.

Through his address: *Martin: The Man, his Message, and the Mission*, featured speaker Rev. Paul Hobson Sadler, Sr. offered insight into the legacy of Martin Luther King Jr. Sadler, who is president and chairman of Creative Arts Ministries and adjunct professor of Religious Studies at Cleveland State University, stated that the challenge to any great organization is to risk unity without uniformity. He stressed the importance of affirming an individual's right to bring his or her unique gifts to the table to effect change and to share power without feeling the need to be submerged into one culture.

Sadler applauded the diversity exhibited in a brief film presentation prepared by Glenn's Office of Equal Opportunity Programs (OEOP). The film celebrated the MLK event and documented equal opportunity programs and awards achieved on behalf of Glenn over the past year.

Last year the MLK award recognized the vital roles that selected members of the advisory groups play in carrying out the mission of Glenn's OEOP. This year, the awards recognized 43 supervisors, nominated by past and present advisory group members.

Robert Romero, OEOP interim chief, noted that without the support of these supervisors, Glenn would not be able to achieve a standard of excellence in equal opportunity. “It is my opinion that Dr. King Jr. laid the foundation for equal opportunity and civil rights,” he said. “Therefore, it is the highest honor and award that I can give to recognize individuals around Dr. King's holiday.” ♦



Photo by S. Jenise Veris

*MLK Keynote Speaker Rev. Sadler (seated) took time after the event to interact with employees. He is pictured here autographing his latest book, *Walk in the Light*, for Kathleen Naugle, Computer Services Division. Naugle is co-chair of the Native American Advisory Council.*

National Aeronautics and
Space Administration

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